

We claim:

1. A method of producing carbon nanoparticles comprising the steps of:
  - (a) providing an electrochemical bath of an organic solution disposed between silicon wafers coated with iron and nickel nanoparticles as electrodes;
  - (b) imposing a direct current potential volts between said electrodes; and,
  - (c) imposing a current density of approximately 12 milliamps per square centimeter between said electrodes for a time sufficient that carbon nanoparticles are developed on said electrodes.
2. The method according to Claim 1 wherein said organic solution is a mixture of methanol and benzyl alcohol.
3. The method according to Claim 1 wherein said organic solution is at a temperature of from approximately 10 to approximately 80 degrees C.
4. The method according to Claim 3 wherein said organic solution is at a temperature of from approximately 25 to approximately 60 degrees C.
5. The method according to Claim 1 wherein said organic solution is at room temperature.
6. The method according to Claim 1 wherein said organic solution is at an electric field of from approximately  $5 (10^4)$  to approximately  $5 (10^5)$  dc volts / meter.
7. The process according to Claim 6 wherein said organic solution is at an electric field of approximately  $2 (10^5)$  dc volts / meter.
8. An apparatus for producing carbon nanoparticles comprising the components of:
  - (a) a container suitable for housing an electrochemical bath of an organic solution disposed between two electrodes;

- (b) an anode and a cathode coated with catalytic nanoparticles as the electrodes in said container; and,
- (c) means for imposing a direct current potential volts between said electrodes.

- 5 9. The apparatus according to Claim 8 wherein said means provides:  
means for imposing a current density of approximately 12 milliamps per square  
centimeter between said electrodes for a time sufficient that carbon nanoparticles are  
developed on said electrodes.
  
- 10 10. The apparatus according to Claim 8, wherein each of the carbon nanoparticles  
include:  
a nanotube having a diameter of up to approximately 100 nm.
  
- 11. The apparatus according to Claim 8, wherein each of the carbon nanoparticles  
15 include:  
a nanotube having a length of up to approximately 50  $\mu\text{m}$ ,